

REPAIR STRATEGIES IN CONVERSATIONAL KICKAPOO

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Syntactic repair is one strategy used by participants in conversations to take or maintain turns, to correct usage errors, or to replace an element with a contextually more appropriate element. Two types of syntactic repairs, recyclings and replacements, used by an elderly native Kickapoo speaker in narratives about her ancestors are examined here. Recycled repairs include the repetition of already uttered elements of the sentence and it is proposed here that the speaker uses this strategy to delay as she searches for lexical items needed later in the sentence. The replacement repairs made by this speaker are interesting for the morphological structures of the repaired and repairing items and for what those structures indicate about the morphology of polysynthetic languages.

1. INTRODUCTION TO REPAIR. Sacks, Schegloff & Jefferson 1974 established the preference for 'self-correction' over 'other-correction' among participants in the interactive social organization of conversations. Because the term 'correction' implies that an error has been made, and because their data indicate that often no hearable error is the source of such correction, they prefer the term 'repair', a term used by others in subsequent discussions of this phenomenon (Levelt 1983). Fox, Hayashi & Jaspersen (MS) define repair as 'instances in which an emerging utterance is stopped in some way, and is then aborted, recast, continued, or redone'.

Following the lead of Fox et al., this discussion will focus on same-turn self-repairs in Kickapoo,¹ although subsequent-turn self-repairs may be introduced to complete the analysis of particular types of repairs. 'Self repair' is the phenomenon discussed by Schegloff et al. and Fox et al. in which the speaker who utters the repaired segment is the same speaker who utters the subsequent repairing segment. 'Same-turn' or 'first-position' repair is repair that takes place within the same Turn Constructional Unit as the repairable.

1.1. A SCHEMA FOR THE ANALYSIS OF CONVERSATIONAL REPAIR. In his discussion of monitoring and self-repair in Dutch, Levelt 1983 presents a three-phase process of repair as it occurs in natural speech: the monitoring phase, the editing phase, and the repair proper. We will be concerned here with the repair proper. This schema is offered here simply to provide terminology for discussing the mechanics of repair.

There are, according to Levelt, three parts to the repair utterance, as diagrammed in Figure 1. First is the Original Utterance, which contains the 'trouble spot' or Reparandum, and ranges from the last sentence boundary before the Reparandum to the Moment of Interruption. The Moment of Interruption may occur immediately following the Reparandum, or it may be delayed for a number of syllables or words. In Figure 1, the Delay (d) of interruption is measured in syllables.

The second part is the 'editing phase' which consists of a pause or an editing term, such as *uh*, or *eeh* in Kickapoo. A pause followed or preceded by an editing term may be used. The editing phase may not be present in all repair processes, and its absence may correlate with a longer Delay in the original Utterance before the Moment of Interruption, as the speaker edits while speaking.

Part three is the repair itself. If material from the Original Utterance is reproduced, this material is known as the 'span of retracing'—which, like the Delay, is measured in syllables in Figure 1 (overleaf). Following the Retracing comes the Alteration, the material changed from the Original Utterance. The repair proper ends at the first sentence boundary following the Alteration.

2. REPAIRS IN THE KICKAPOO DATA. I have identified three structurally different kinds of repairs in the Kickapoo data: recyclings, replacements, and restructurings. I will discuss recyclings and replacements here, leaving restructurings for analysis in future work.

2.1. RECYCLINGS. A recycling is a repetition by the same speaker of words already spoken. As observed by Schegloff 1987, it generally occurs at the very beginning of a turn, where it is used by speakers as a strategy for claiming a subsequent turn. Indeed, six of the eight recyclings that occur in the text of a conversation between two

¹ Kickapoo is a Central Algonquian language spoken in the United States and in Mexico. This work was done with the help of the Kickapoo Tribe of Oklahoma and it is their dialect that is studied here. The Kickapoo Tribe of Oklahoma, numbering approximately 3,000 members, is one of three federally recognized Kickapoo groups in the United States. The Kansas Kickapoo Tribe numbers about 500, with a few active speakers, including one fluent speaker who is teaching the language at the Kickapoo Nation School in Kansas. The Texas Band of the Kickapoo residing in Eagle Pass, Texas, is officially called the Kickapoo Traditional Tribe and has about 300 members. There is a fourth group of Kickapoo in El Nacimiento Rancheria in the state of Coahuila in Mexico, about 125 miles southwest of Eagle Pass, Texas. The Texas and Nacimiento groups are considered to be the most traditional groups, having retained the Kickapoo language and culture (Akira Yamamoto, p.c.). The data analyzed here were collected in Nacimiento by members of the Oklahoma Band as part of a project aimed at gathering ancestors' stories from the Nacimiento elders.

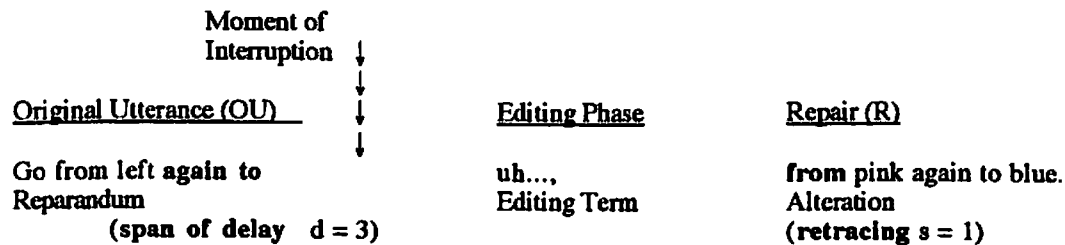


FIGURE 1. The structure of repair.

older women recounting ancestor stories are repetitions, resayings, or recyclings of the first syllables or words of a turn.

Schegloff notes that recyclings of turn beginnings are related to overlap; he observes that speakers who have, for one reason or another, begun speaking before a previous speaker has finished may repeat the portion of speech uttered during the overlap. Focusing on K's utterance, we have the following example (Schegloff 1987:75):

- (1) R: Well the uhm in fact they must have grown a culture, you know. They must've --- I mean how long---he's been in the hospital for a few days, right? Takes a[bout a week to grow a culture.
K:]I don't think they grow a *I don't think they grow a culture to do a biopsy.

Obviously the recycle begins at the asterisk, the point at which R's turn has ended. Assuming the conversational principle that only one person speaks at a time, Schegloff hypothesizes that these recycling repairs are necessary to mend infractions of the constraint against overlapping. Because a current speaker may add tag questions, address terms, or etiquette terms, or may rush-through into a new unit-type to retain the floor, potential subsequent speakers who have aimed for the earliest possible Transition Relevance Place may begin talking before the present speaker stops. In example 1, R asks for confirmation, which would generally be perceived as allocating a turn to a subsequent speaker, but then continues talking. K overlaps, then repairs by repeating the portion overlapped.

Of the six Recyclings occurring in turn-initial position in the Kickapoo text, only one involves an overlap:²

- (2) A: Mehkooθikweehiki wiihisaiaç'i eehosihtoohaa[ç'i
mehkooθi-kweehiki wiih-isai-aat-i eeh-osihtooh-aat-i
obtain.it-3PL.INTER FUT-do.so-3PL-PPL 2AOR-make.it-3PL-CONJ
- S:]Mee *meemehkooθikweehiki.
mee meemehkooθi-kweehiki.
(found) keep.obtaining.it-3PL.INTER
- A: 'They must have found a way to do that (make spoons).'
- S: 'They were finding a way.'

The Original Utterance here consists of a single syllable, *mee*, the first syllable *mee* of the reduplication of the verbal stem **mehkooθi*- 'obtain it', with no span of delay, as delay would not occur with a repetition error. The

² The symbol '[' is used in a prior sentence to indicate the point at which a speaker is overlapped. The symbol ']' is used to indicate that, with the following sentence, the speaker has overlapped another speaker.

The first line of each example contains a broad phonetic transcription of the speaker's utterance. The second line contains a morphological analysis of each utterance. Hyphens are inserted at morpheme boundaries; spaces separate words. The third line contains a translation of the Kickapoo morpheme with periods inserted between English words where the Kickapoo morpheme is translated into an English phrase. Hyphens between English words or phrases indicate Kickapoo morpheme boundaries. Abbreviations used throughout include the following:

AN	Animate	INTER	Interrogative
AOR	Aorist	LOC	Locative
CONJ	Conjunct mode	OBL	Oblique
CONJ.PPL	Conjunct participle	OBV	Obviative
EXC	Exclusive	PL	Plural
FUT	Future	PPL	Participle
INAN	Inanimate	PROX	Proximate
INDEF	Indefinite	REDUP	Reduplication
INTI.CH	Initial change	S	Singular
INT	Intransitive final		

Periods between abbreviations indicated fused meanings in the affixes; i.e. 3PL.INTER. indicates the third person plural interrogative form.

retracing span corresponds to the Original Utterance, a repetition of the first syllable followed by completion of the utterance.

Overlappings sometimes occur when a subsequent speaker misreads an end-of-turn cue from a previous speaker. In Kickapoo, such end-of-turn cues can be given by syntactic requirements or by the stress patterns of the language. In the data set, the cues for a completed Turn-Constructional Unit in Kickapoo are those that mark a completed grammatical unit. For all unit-types, these involve the stress patterns of the language, patterns accompanied by a lowered pitch following the primary sentential or unit stress, and a devoicing of final vowels before a sentence-final pause, or unit-final pause in the case of phrasal and lexical units.

Stress in Kickapoo is not lexically determined, but is instead determined sententially. Voorhis' discussion (1974) of sentence-level stress in Kickapoo accounts for a primary stress on the fourth 'accentable' vowel from the end of the sentence. Accentable vowels can occur in either short syllables (those with only one vowel) or in long syllables (those with two vowels). The 'two vowels' can be either a long vowel, or two vowels juxtaposed, one of which receives either a primary or secondary sentential stress. Long syllables can be either strong or weak, and either vowel of a strong syllable can be accented, but only the second vowel of a weak syllable can be accented.

All vowels following the primary sentential stress are lower in pitch than the primary stressed vowel. The non-speaking participants in a conversation are thus cued to the approaching end of the turn-constructional unit by the occurrence of the primary stress and the lowered pitch of the subsequent vowels.

The pauses that normally follow a completed clause or unit are preceded by devoiced vowels and preceding sonorants. Voorhis (1974:3) discusses this phenomenon:

'Vowels are fully voiced, like the vowels in English with the exception of the last vowel in a sentence if that vowel is unaccented and followed by a pause.

'An unaccented vowel at the end of a sentence is whispered after p, t, c, k, θ, or s, and also after w or y preceded by one of these consonants; the w or y is then also whispered.'

When a speaker is indicating the end of a turn, these cues are present. Speakers wanting to hold the floor and continue their turn can rush-through and begin another sentence. In this instance, the clause- or unit-final devoicing does not occur.

(3)	S:	<i>lininini</i>	<i>tehkinaakanani</i>	<i>napi</i>
		<i>iini</i>	<i>tehkinaakan-ani</i>	<i>iin-a-pi</i>
		Then	cradle.board-INAN.PL	that.one-AN.S-it.is.said
		<i>nekoti</i>	<i>ihkweea,</i>	<i>eehoniic'aaneθi,</i>
		<i>nekoti</i>	<i>ihkwee-a,</i>	<i>eeh-o-niic'aaneθ-ii-t-i,</i>
		one	woman-AN.S	2AOR-have-child-INT-3D-CONJ
		<i>aakwipi</i>	<i>nahi</i>	<i>nepaanic'i</i>
		<i>aakwi-pi</i>	<i>nahe</i>	<i>nepaa-init-i</i>
		not-it.was.said	never	sleep-4S-CONJ
		<i>oniic'aaneθani.</i>	=	<i>Maamaamayoniani taθwi.</i>
		<i>o-niic'aaneθ-ani.</i>		<i>maa-mayoo-iiniani tawi.</i>
		her-child-AN.S.OBV		REDUP-cry-4S much

'And about those cradle boards, it was said that when that one woman gave birth, her baby never slept. It cried too much.'

The rush-through is indicated by the symbol =. The primary sentence stress falls on the second syllable of *oniic'aaneθani* 'her child', with secondary stress on the fourth syllable and falling pitch on the vowels subsequent to the primary stress; but there is no devoicing of the final vowels and sonorants.

Returning to ex. 2, if Mrs. S's recycling is an attempt to repair an overlapped turn beginning, the overlap is more likely to be caused by her eagerness to speak than by some syntactic miscue. With the verb *wiihisaiaici* 'they will/would do it', Mrs. A has not completed an acceptable Kickapoo sentence since the verb *isai* is a relative verb requiring a relative complement. She completes the sentence with a subordinate clause, which, in 2, is overlapped by Mrs. S.

Mrs. S continues with the following:

(4)	S:	<i>Nahkohipi</i>	<i>ihkweea.</i>		
		<i>nahkahi-pi</i>	<i>ihkwee-a</i>		
		respond-INDEF	woman-AN.S-3S-CONJ		
		<i>*Meh</i>	<i>*mehio</i>	<i>*mehkameki</i>	<i>wiihisaiki.</i>
		<i>meh</i>	<i>mehkw</i>	<i>mehkam-eki</i>	<i>wiih-isai-ki</i>
		(find)	(find.him)	find.it-INDEF	FUT-do.so-INDEF

'With respect to that woman. *Found *Found him *It was found. A way was found to do it.'

The recycling in ex. 4 seems to be part of a lexical search process, as Mrs. S searches for the verb form she thinks is appropriate. The first syllable of the verb is recycled in the first repair, *meh*, followed by the second syllable of a plain transitive verb *mehkooθi-*, one taking an animate object. She replaces this with a transitive inanimate verb *mehkam-* as the found object was an inanimate, a way of doing something.

Many of the recyclings in this text, all of them performed by Mrs. S, appear to serve this lexical search function. Accompanying these recyclings are instances in which, according to Mrs. A (the language consultant who assisted in the transcription and analysis of this tape), the lexical search was not successful. Consider the following:

- (5) S: *Na *na *nahi nekina Savineki.
 na *na (ii)n-ahi kehcine(?) Savinas-eki.
 that.one-LOC near Savinas-LOC
 'There near Savinas.'

Mrs. S has been trying to establish for Mrs. A the identity of the central figure of a story she is telling. She indicates the direction of the ranch where the man's children, one of whom is known to Mrs. A, grew up. Mrs. A asks 'Over there in the country?' and Mrs. S. responds with 5.

According to Mrs. A, *nekina*, the word used to describe Savinas, the name of a Mexican town, does not have any meaning in Kickapoo. She suggests that perhaps what Mrs. S meant was *kehcine* 'near', since Savinas is the town closest to the ranch where her friend grew up. Ives Goddard (p.c.) suggests an alternative explanation: the second person singular pronoun *kiina* 'you' can be used in Mesquaki (Fox) for 'as I told you', and can be preceded by the cliticized *neeh* 'also'. This would give something like the *nekina* form produced by Mrs. S; but, again, this was a form unfamiliar to Mrs. A.

Another interesting function of recycling by Mrs. S is the completion of sentences begun by her, but not syntactically completed.

- (6) S: lini eeh nanaaci eehsekisineeci.
 iini eeh nanaaci eeh-sekisin-e-ci
 and um while 2AOR-lay.him-INDEF/3
 A: Uh-huh.
 S: *Ona *onakeehkooki. (5.0)
 ona onakeehkw-eki
 (bark) bark-LOC
 A: 'That's when he was laid (there).'
 S: 'Uh-huh.'
 A: 'In that bark.'

In Mrs. S's first utterance, *sekin-* 'lay him' is a relative verb requiring a complement. Mrs. S appears to have finished her turn: a primary sentence stress falls on the second syllable of *eehsekisineeci*, with falling pitch on subsequent vowels and devoicing of the vowels in the final two syllables. Mrs. A utters a continuer, *Uh-huh*. Mrs. S then completes the syntactic requirement of her previous sentence with a locative complement *onakeehkooki* 'in that bark', the first two syllables of which are repeated, much as though she had been overlapped. A careful listening to the tape indicates that no such overlap has occurred; the turn was clearly ended.

From the context of the conversation up to the point of the repair, it is quite clear that the baby was laid in the bark, so the complement is semantically unnecessary, but the syntactic requirement predominates.

To conclude this section on recyclings or repetitions, we return to Schegloff's analysis of turn-initial recyclings. Schegloff (1987:74) mentions, in particular, pre-placed appositionals, *well*, *but*, *so*, *y'know*, and *yeah* in English, and hypothesizes that these appositionals are used by potentially subsequent speakers aiming for the earliest possible Transition Relevance Place to begin their turn. They, of course, base their potential starting point on their projection of an impending end of unit type, a projection which is in turn based on their knowledge of the syntactic construction of the unit type in progress. A subsequent speaker may use these appositionals to rush into a subsequent turn without risking loss of any of the informational content of his/her turn.

Kickapoo syntactic structure, with the tendency to place adverbials in sentence-initial position, would accommodate this recycling function very nicely. Indeed, many sentences, particularly in discourses whose purpose is to recount personal history incidents, begin with *iini* or *niini* meaning 'and then', or 'that's how', or with *see* 'then'. Mrs. S begins many sentences with *iini*, only one instance of which is involved in a recycling repair, but without overlap.

Mrs. S's use of recyclings as place-holders during lexical searches may very well be idiosyncratic; further analysis of other speakers and the functions of their recyclings will be necessary to establish recyclings as an overlap

repair strategy for Kickapoo speakers. Analysis of Mrs. S's repairs offers an alternative to overlap repairs as a function for recyclings in Kickapoo for this speaker.

2.2. REPLACEMENTS. Replacements occur when an item in the Original Utterance, the Reparandum, is replaced with an item in the repair, the Alteration. Replacements usually take place within a single constituent category, with noun phrases replacing noun phrases, verb phrases replacing verb phrases, and so on. This includes the replacement of inflectional morphology with other inflectional morphology, replacements that encode a change in the arguments or argument structure of the verb, or the animacy, number, or proximity status of the noun.

Levelt (1983:87-8) offers Appropriateness repairs and Error repairs as major sub-classes of replacement repairs. Appropriateness repairs are those made by a speaker who replaces one lexical item with another that he/she deems to be more specific in its reference, and therefore more appropriate to the context. Error repairs replace an incorrect item with a correct one.

The following is an example of a Kickapoo Appropriateness repair:

- (7) S: *Niinahi nekotahi (2.0) niinaana eehowiikiyaake
 (ii)n(i)-iinahi nekot-ahi niinaana eeh-oiki-aak-i
 then-there one-LOC we 2AOR-live-1PL-CONJ
 *eehkehkesiyaake.
 eeh-kehkesi-aak-i
 2AOR-camp-1PL-CONJ

'And we lived there somewhere *we camped there.'

When one lives in an established residence, the verb *oiki-* is used. Mrs. S's comment comes in the middle of the story about the ancestors' need to move about during the hunting season, establishing camps as they went. Although they did live in these camps for a period of time, they eventually returned to their homes either in a village or on a ranch. The term for such camping out, *kehkesi-*, which is more appropriate to the context, replaces *oiki-*.

Earlier in the text, Mrs. S has made it clear, through another Appropriateness repair, that she is talking about a particular kind of hunting that involves migrating from place to place:

- (8) S: Kapootwee eepikepiimeehia see
 kapootwee (w)eepi-kepiim-eehi-a see
 later begin-switch-have-3S then
 eehpoonisaasiisaac'i.
 eeh-pooni-saa-siisaa-t-i
 2AOR-stop-REDUP-hunt-3S-CONJ

A: Ooh.

- S: *Eehpooniaamihaamiic'i.
 eeh-pooni-aamii-aamii-t-i
 2AOR-stop-REDUP-change.residence-3S-CONJ

S: 'At a later time he started having the switch when he stopped hunting.'

A: 'Ooh.'

S: 'When he quit hunting/migrating.'

Here *siisaa-* is a more general term for hunting that does not include the aspect of change of residence. The more specific term, *aamii-*, means 'to change residence', or, when used in the context of hunting, 'to move camp' (Voorhis, 1986:4) and is translated by Mrs. A as 'hunting/migrating'.

An example of an Error repair can be seen in the following:

- (9) S: Kweiiki yoohi wiikiki seeski *niinaana
 aakwi eiiki yoohi oiki-ki seeski niinaana
 not also there live.there-INDEF merely our(EXC)
 nekya *nekinaana iinia
 ne-ky-a ne-ky-enaan-a iin-ia
 my-mother-ANS our-mother-our-ANS that.one-ANS
 manisi maatakohweewa c'aki iθaa'eeni.
 manisi maatakohwee-wa c'aki iθaa'een-i
 like.this cover.it-3S/4 small tree-INAN.S

'There was no living/dwelling there. My mother, *our mother just did like that and covered a small tree.'

Here *-ky-* 'mother' is an obligatorily possessed noun. In addition to the possessive morphemes that must be affixed to the noun, a pronoun can be used to emphasize the possessor. Mrs. S uses *niinaana* 'our' before the singularly possessed *nekia* 'my mother', the Reparandum in the Original Utterance, and repairs that with the Alteration *nekinaana* which carries the first person plural possessor suffix *-enaan-* followed by the animate singular suffix *-a*.

In these three replacement repairs, the Moment of Interruption occurs immediately following the Reparandum; it is followed by the Alteration with no intervening Delay and without retracing any of the Original Utterance. In 8, Mrs. A has recognized a viable end of unit type signaling a possible turn allocation, and interjects with a responsorial *Ooh*, but Mrs. S's immediately subsequent turn begins with the repair of the preceding verb phrase. Immediate repair either directly following the Reparandum, or with the Moment of Interruption occurring mid-morphemically in the Reparandum takes place in every replacement repair occurring in this conversation. This allows for an interesting comparison between replacement repairs in Kickapoo and those occurring in English and Japanese as discussed by Fox et al. (to appear).

Fox et al. have examined the phenomenon of 'morphological repairs'. A morphological repair is one in which the Reparandum consists of only a single morpheme of a word in the Original Utterance, the Alteration consisting of the repair of that morpheme alone. They found examples of this sort of repair in Japanese, but not in English. Consider the following example from their Japanese data):

- (10) K: *ja nanji goro ni kurida [shi-*]soo?*
 then what.time about OBL go.out
 'Then about what time (shall we) go out?'

Here only the inflectional ending of the verb, a bound morpheme, is repaired as the speaker replaces the 'adverbial' ending *-shi* with the cohortative ending *-soo*.

Fox et al. also suggest that three differences between the morphological and syntactic structures of Japanese and English account for the presence of morphological repair in one language, and its absence in the other.

First, there is the phonological structure of the verb endings. In Japanese, both the *-shi* and *-soo* endings are syllabic. In English, most inflectional suffixes consist of a single sound which very often clusters with another consonant to form the coda of a syllable. Replacement of an inflectional affix, then, would require either the retracing of some syllabic part of the lexical item plus the replacing affix, or the pronunciation of a single consonant in the absence of retracing, an unlikely occurrence.

The typological differences between English as an inflecting language and Japanese as an agglutinating language contribute to the basis for a second possible explanation for the distribution of morphological repair in the two languages. In an agglutinating language, each morpheme has a single meaning, while in an inflecting or fusional language, two or more grammatical meanings may be 'fused' in a single bound morpheme. An interesting question for future study of repair is whether, cross-linguistically, the semantically complex inflectional affixes of fusional languages tend to be more resistant to morphological repair than the semantically non-complex affixes of agglutinating languages.

Finally, the English inflectional suffixes are always agreement markers since surface occurrence of subject noun phrases is not optional in English. Suffixes, then, refer back to the subject, and neither occurs independently of the other. In Japanese, the verbal suffixes are not agreement markers, but instead they modify the verb in some adverbial way.

According to Fox et al., these differences indicated that the verb endings in English are more tightly 'bonded' to the verb than are verb endings in Japanese, and hence are less available for individual replacement than are verb endings in Japanese. In a sense, then, it is possible that English verb suffixes are not available as interactional objects in the same way that Japanese verb suffixes are. Differences in repair strategies across the two languages may thus arise from differences in the organization of their verb morphology.

Morphological repair of the sort seen in Japanese did not occur in this Kickapoo discourse. Examination of the Kickapoo data in light of the three morphological and syntactic differences discussed by Fox et al. gives an indication of relative importance of these three factors in determining whether a speaker of a particular language will perform morphological repairs or not.

The shape of the Kickapoo inflectional morphology seems to be of primary importance as a determining factor. While Kickapoo has both prefixal and suffixal verbal and nominal inflections, the major part of Kickapoo inflectional morphology is suffixal. I have so far found no instances of a speaker repairing only an inflectional affix. Consider the following:

Mrs. A and Mrs. S have been discussing the cooking utensils used by the ancestors as they migrated, hunting near the Great Lakes. There was a scarcity of bowls and spoons, requiring that all share from the same bowl using the same spoon, until one old man, tired of not getting his fill, fashioned his own wooden spoon. Soon the making of individual wooden spoons and bowls caught on, and the Kickapoo still make them both as an art form and as kitchen utensils required in every Kickapoo household.

Mrs. A is curious about the brass kettles which seemed to be unusually plentiful during this time of the scarcity of bowls and spoons. Modern-day Kickapoo still use these brass kettles, and Mrs. S has some of them in her kitchen. Immediately preceding Mrs. A's repaired statement, Mrs. S asks which kettles Mrs. A is referring to:

- (11) A: *Niiniki* *taanahi* *o'ikaaci*
iini *iin-iki* *taan-ahi* *o'iki-aat-i*
 and those-AN.PL where-LOC be.from.there-3PL-CONJ
- aahkokookapeowac'iki* *taanahi* *ayese*
ahkohkw-aki *peowac'iki* *taan-ahi* *ayesee*
 kettle-3PL brass-AN.PLCONJPPL where-LOC long.ago
eehikitakoeki?
eeh-iki-tako-aki
 2AOR-exist-3PL
- S: *liniki* *maahaki?*
(ii)n-iki *maah-aki*
 that.one-AN.PLPROX this.one-AN.PLPROX
- A: 'And where were those brass buckets from that they used a long time ago?'
 S: 'Those and these?'

Demonstratives in Kickapoo encode a number of distance-from-the-speaker relationships. Mrs. S has pointed to two sets of kettles in her kitchen, one set hanging near her, *maahaki*, and one set further away on the countertop, *iiniki*. In 11, Mrs. A replies that these are indeed the ones she means, but refers to them in their more contemporary usage:

- (12) A: *Eewakwe*
INIT.CH-aw-akw-i
 PPL-use.him-1PL/3PL-CONJ
- *eewaac'iki* *aapehe.*
INIT.CH-aw-aat-iki *aapehe*
 PPL-use.him-3PL/4PL-CONJ.PPL repeatedly.

'The ones we used, *the ones they usually used.'

Of interest here is that Mrs. A repeats the entire verb, including the stem, which is preceded by the initial change marker. But she repairs this immediately, the suffix encoding the subject and object being the only Alteration of the Original Utterance as completed before the Moment of Interruption: *-aat-* third plural on fourth plural for *-akw-* first plural on third plural. Apparently, indication of the immediately available kettles has caused Mrs. A to shift focus from the ancestors to the present, but she returns the focus to the time of the ancestors through her repair.

A second reason for the lack of morphological repair involving Kickapoo inflectional suffixes lies in the phonological properties of the language. In Kickapoo, almost all inflectional suffixes are syllabic, if not polysyllabic, in their sound structure. However, syllabification in Kickapoo requires that a consonant go with the vowel that follows it. Because most suffixes begin with a vowel, a final nominal or verbal stem consonant will be syllabified with the first vowel of a following suffix. For example, when the Animate Singular Proximate marker *-a* is added to a noun with a consonant-final stem such as *memeeθ* 'fish', the resulting noun is syllabified *me-mee-θa*.

In the verb form *eewakwe* in 11 above, the first person plural inflectional morpheme *-akw-* is preceded by the stem *-aw-* 'use him'. Before the initial vowel of the inflectional affix, the final glide of the stem syllabifies with the following vowel. The inflectional morphology in Kickapoo, then, like that in English, is more closely phonologically tied to the stem than is the case in Japanese, making morphological repairs unlikely to occur.

If Fox et al.'s second criterion for non-occurrence of morphological repair, i.e. semantic complexity of inflectional morphemes, is a significant factor in the absence of morphological repair in English, then we would expect, as is the case, that Kickapoo speakers would not perform morphological repairs either. Kickapoo nominal affixes encode number, animacy, and, in the case of third person animates, proximity or obviation status. Verbal inflectional affixes similarly encode number, animacy, and proximation status, in addition to person and, in the case of transitive verbs, agent and patient relationships.

The third factor considered by Fox et al. in determining how tightly bonded verbal morphology is to the verb, and thus how susceptible to morphological repair, is whether the verbal affixes are agreement markers or not. Unlike the English agreement markers, Kickapoo verbal inflectional morphology generally occurs without the presence of independent noun phrases, and performs the functions of cliticized pronominal arguments. This inflectional morphology does not have to agree with any other element in the sentence, and is most often the only carrier of argument structure in a sentence.

Unlike conversational English—in which a subject or an object can occur alone, as in response to a question—the Kickapoo subject and object markers cannot occur without a verb. Conversely, the verb cannot occur without inflectional morphology. This morphology is, then, more tightly bonded to the verb than English inflectional morphology, and certainly more tightly bonded than Japanese adverbial morphology; thus it is less likely to occur independently as the result of morphological repair.

Thus far, the discussion of Replacement Repairs in Kickapoo has focused on replacement of suffixes and lexical items. The conversation between Mrs. S and Mrs. A did contain one occasion of the replacement of verbal prefixes. With a few exceptions, the verbal prefixes in Algonquian languages carry information about tense and mode, rather than about argument structure. Prefixal tense and mode markers occur in first position in the verbal morphology. Preverbs, which carry adverbial and aspectual information, occur in the second position, or following the exceptional argument markers.

The exceptional argument markers are the first person *n(et)*- and the second person *k(et)*-, which mark subjects in direct paradigms and objects in inverse paradigms on Independent Order verbs. The Independent Order does not have any prefixal tense or mode marker, leaving the first position in the morphological string open for these markers.

The Appropriateness Repair in 13 gives a bit of evidence that these prefixes are like the Japanese adverbial suffixes in that they are separable from the verb. Unlike the repairs involving replacement of a verbal stem or argument markers—in which it appears that, once the verbal argument markers are begun, they must be completed with suffixal argument structures intact—this is apparently not the case when prefixes are involved.

- (13) S: **linisee* *nahoc'eaapi* (1.0) **eehkaski* (1.0)
 **iini see* (ii)n-a *oc'i-aapi* *eeh-kaski*
 and then that.one-AN.S therefore-have.been 2AOR-be.able.to
 **eepiosiihtoo'ci* *ee'imehkoo'bi'ci*.
 weepi-osihtoo-t-i *ee'ci-mehtoo'bi-t-i*
 begin-make.it-3S-CONJ 3AOR-obtain.it-3S-CONJ
 'And then he therefore had been, *was able, *began to make them in order to have some.'

The one-second pauses before the replacements show that Mrs. S is searching for the appropriate preverbs that will express the incipient stage of the development of individual spoons. The original spoon, according to Mrs. S, was not well made, and the old man tried hard to make a good spoon; the sentence containing repair immediately follows these comments.

The set of preverbs in the first Original Utterance, *oci-aapi*- 'therefore had been able', is perfective, indicating that the task had been accomplished. We know from previous comments from Mrs. S, and from those that follow, that this was not the case.

The second Original Utterance of 13, the Alteration portion of the first repair, contains a second aorist tense/aspect marker *eeh*- and the preverb *kaski*- 'be able'. The second aorist denotes an action not yet completed at the time of speaking, or in the case of a narrative, at that point in the action being recounted. While the action of the making of the spoons may have been an ongoing activity, the use of *kaski*- implies that acquisition of the ability to do it well had been accomplished. The old man was still practicing spoon-making and was not yet able to make them well, so the preverb is an inappropriate choice. Mrs. S then settles on the inchoative preverb (*w*)*eeepi*- and completes the verb phrase.

During transcription of this and other texts, Mrs. A gave another indication that preverbs are less tightly bonded to the verb than are argument markers. If a word got to be 'too long', a happening which oddly enough seemed to embarrass Mrs. A, she initially suggested, and later insisted, that we break the word when writing it down between the preverb and the stem, even when the preverb was preceded by required tense or mode markers. Although she could easily point out the argument markers in the string of letters written on the page, she was very firm in her declarations that a long string could not be broken following the verb stem and preceding even the longest of argument markers. Whether it is the suffixal nature or the semantic nature of the argument markers that makes them resistant to morphological repair remains to be determined through analysis of more data and through testing of speakers' intuitions. The only obligatory prefix that was begun and repaired without completion of the lexical unit occurred on a noun.

- (14) S: **o'ii* **o'ii*
 o-ii (meeh) *o'ii (meeh)*
 her-younger.brother her-younger.brother
 **otooteemani* *meekweehe* *iina* *ihkweea*
 o-tooteem-ani *meekweehe* *iina* *iikhwee-a*
 her-brother-AN.S.OBV probably that woman-AN.S
 'It must have been that woman's younger brother *her younger brother *her brother.'

Older and younger siblings have different responsibilities in the rearing of children. The older brother disciplines a younger sister's children, and a mother's older sister is to be regarded and treated by a child as another mother. There are specific terms for older and younger brothers and sisters, as well as a generic term for siblings when the age relationship is not known. This is again from the story about the old man who did not get his fill to eat because, by the time the bowl and spoon came around to him for his turn, there wasn't enough left. According to Mrs. A, Mrs. S must have assumed that this was a younger brother of the woman who told this story to Mrs. S's grandmother, because no one would treat an older brother that way. But because Mrs. S is not sure of the relationship, she replaces the younger brother term with the generic sibling term.

The Moment of Interruption in the Original Utterance occurs after the first syllable of the noun stem *-θimeeh-* 'younger brother', an obligatorily possessed noun in Kickapoo. Possession is marked by a prefix that encodes the person and immediately precedes the noun stem, plus a suffix or pair of suffixes that encode the number of the possessor and the possessed. When an animate object is possessed by a third person, as is the case here, the object obligatorily takes an obviative (or fourth person) marking, *-ani* for singular and *-ahi* for plural. In spite of this obligatory constraint, Mrs. S does not complete the noun phrase, perhaps because obligatory possession is already accomplished by the prefix, and the obviation status of the noun is entirely predictable. Whether the noun will be singular or plural is not predictable from the morphology alone, but Mrs. S has already established, in the immediately preceding utterance, that she is talking about one person. Verbal argument markers are never predictable, even in a context where a singular subject has been established, since a conjoined subject noun phrase can be added after the verb.

It remains to be seen in analysis of additional repair data whether possessive suffixes are subject to morphological repair. We have seen in 9 above, with the repair of *ne-ky-a* 'my mother' to *ne-ky-enaan-a* 'our mother', an instance where such morphological repair does not occur; but this may be a result of the phonological changes in the noun stem and the possessive suffix that take place when affixation occurs.

Both Appropriateness Repairs and Error Repairs occur as replacements in Kickapoo conversation. Appropriateness Repairs often involve the replacement of a semantically general term by a more specific one, as in the terms for 'hunting' as opposed to 'migrating/hunting' and 'live' as opposed to 'camp'. This change from general to specific is not always the case; there is an example of a more specific term 'her younger brother' being replaced with a general term 'her brother', but again semantics is crucially involved here. Verbal argument markers are also often repaired; all such repairs in these data occur only after the verb, and all of its obligatory affixation have been completed.

Error Repairs correct mismatches in the syntactic or morphological context of the sentence, such as the replacement of 'my mother' with 'our mother' following the possessive pronoun for 'our'.

Replacements of affixes in Kickapoo, in these data, do not include morphological repairs in which the Alteration of a repair consists only of argument markers or possessive affixes. Factors involving the phonological structure of Kickapoo words, the semantic complexity of verbal and nominal affixes, and the functions of verbal affixes as subjects and objects in the sentence indicate that some Kickapoo affixes are tightly bonded to their lexical stems and therefore not susceptible to morphological repair.

3. CONCLUSION. The analysis of repairs performed by speakers of a polysynthetic language such as Kickapoo can tell us much about lexical storage and retrieval in these languages, and can lead us to discovery of significant differences among storage and retrieval functions of speakers of typologically different languages.

Kickapoo, a polysynthetic language, contains many morphemes per word, as does Japanese, an agglutinating language. As in English, an inflectional or fusional language, some of these morphemes, particularly the affixes, carry several different semantic meanings. One particularly striking difference between Kickapoo and the other two languages is in the functional load that verbal affixes carry in these languages. Japanese verbal suffixes convey adverbial information, and English verbal suffixes are agreement markers.

Kickapoo verbal suffixes are pronominal affixes, obligatory in all contexts as they generally carry the only information present in the sentence about the argument structure of the sentence. In all modes except the Independent Mode, these pronominal affixes are followed by a mode-marking suffix, which is bonded to the pronominal affixes by the fact that each mode requires a different set of affixes for all three classes of Kickapoo verbs.

That the speaker whose repairs are discussed here does not interrupt herself in the middle of the verbal affixation in order to begin a repair indicates that these are special units that must be kept together. The speaker interrupts herself mid-morphemically in the production of nominal and verbal stems, observing syllable breaks rather than morpheme breaks, leading to the hypothesis that the coherence of lexical items is not as critical to the speaker as is that of grammatical items. There is supporting evidence for this hypothesis in the study of acquisition of polysynthesis. Analyzing the developing speech of five Mohawk children ranging in age from 1;9 to 4;9, Mithun 1989 observed patterns that parallel some of the observations made here about Mrs. S's repairs.

First, the child acquiring a polysynthetic language must determine how to segment long words into smaller, meaningful chunks. Very young children's limited phonological processing abilities initially restrict this to selection

of chunks of a single syllable in length. Based on data from children acquiring languages with less complex morphological structures, Peters 1983 hypothesizes that, in heavily fusional languages, segmentation will take place along syllable boundaries rather than morpheme boundaries. Mithun found that this was the case with her youngest Mohawk speaker, whose earliest meaningful utterances were single syllables; the syllables chosen were always those that were stressed in adult speech.

Mohawk word stress is basically penultimate. The morphological structure of the language is such that this stress generally falls on the noun or verb root or stem, much as it does in Kickapoo. The child then acquires posttonic syllables, which generally means acquisition of the entire stem or root, but with acquisition again proceeding according to phonological rather than morphological breaks. Roots or stems are learned and stored in pieces corresponding to the number of syllables the child can cognitively process, not as whole lexical items.

An older child in Mithun's study, having mastered the tonic and posttonic syllables, began learning pretonic syllables, the pronominal affixes. As the child got older, larger chunks were manageable:

'... once morphology has been discovered, functional principles can replace phonological principles in the building of the system. Acquisition of morphological subsystems apparently no longer advances according to the position of those systems within the word, but rather according to their communicative value.' (Mithun 1989:295)

If we look at this acquisition process in the light of Kickapoo morphology, we would expect that, if acquisition of Kickapoo proceeds as it does in Mohawk and the child focuses first on the stressed syllable in a string, s/he will generally be attending to a verbal or nominal stem. Many stems in Kickapoo are multisyllabic, with the primary stress falling early in the string of syllables; so, if the child acquires posttonic syllables next, s/he will acquire entire stems.

If, at this point, the child is paying more attention to function than to form, or to one kind of form over another, and has indeed discovered morphology, then moving in a posttonic direction s/he will encounter the pronominal suffixes. The fact that these suffixes are invariant in their position in the string of verbal morphemes is of great help to the child in the acquisition process.

Peters & Menn 1933 list, as one of the factors which aid in morpheme identification, the degree to which a language has distinct 'slots' for particular morphemes, that is, the linearity as opposed to the superposability of pieces of linguistic information. When each kind of linguistic information has its own characteristic position, it is easier for the learner to segment morphemes from each other, to map forms onto meanings, and to learn to assemble new productions.

Observation of Kickapoo parent/caretaker-child interactions would give us valuable information as to what affixal structures the child is hearing in the early years. In Kickapoo, the string of sounds available to the child for segmentation may be more complex (in the conjunct modes) or less complex (in the indicative and imperative modes). Does the child hear and thus acquire pronominal suffixes that are less complex—in terms of morphological content and number of syllables—earlier, recognize them as unsegmented wholes, and acquire other more complex structures later also, by analogy as unsegmented wholes? Further research into the relationship between the acquisition of morphology and into the phenomenon of repair in adult grammar may lead to the discovery of exciting parallels between the two.

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